

## **WSDOT Construction Courses**

The courses listed below are available for local agency attendance.

### **BITUMINOUS SURFACE TREATMENT INSPECTION**

Code: ACC

Hours: 4

#### **Description:**

1. Provides an overview of equipment used on a Bituminous Surface Treatment project
2. Covers the preparation of the roadway before placement of BST
3. Identifies key areas of inspection during placement of BST
4. Includes information on collecting material samples
5. Covers safety procedures and proper traffic control during the project
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

**Objectives:** Upon completion of the course you will be able to:

1. Identify the proper use of equipment in placing BST
2. Implement proper traffic control
3. Perform all necessary documentation
4. Identify lines of communication
5. Obtain the necessary material samples
6. Identify situations which might cause failure in the BST placement

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of Bituminous Surface Treatment projects.

### **BRIDGE AND STRUCTURES INSPECTION 201**

Code: ACM

Hours: 16

**Description:** This course covers construction inspection of bridge and structures. The course will cover many examples of things to watch for and some of the pitfalls faced by our project inspectors and supervisors. Topics will include phases of bridge and structure construction, various walls used on WSDOT projects, structural components, environmental concerns, and safety issues associated with bridge and structure construction.

**Objectives:** Upon completion of this course, participants will be able to:

1. Be better prepared and familiar with potential construction problems before they occur,
2. Understand the critical nature of sequencing during construction,
3. Implement appropriate safety concerns and requirements associated with bridge and structure construction,
4. Understand and monitor the effectiveness of required BMP's for erosion control measures in construction,
5. Understand the importance of following plans and working drawings,
6. Have a better understanding of the many types and purposes of bridge construction.

**Attendees:** Project inspectors, supervisors and managers who will be responsible for bridge and structure construction contract administration

### **DRAINAGE INSPECTION**

Code: ACF

Hours: 8

**Description:**

1. Provides an overview of the proper drainage installation
2. Covers surveying of drainage structures
3. Identifies key areas of inspection
4. Includes information on collecting required material samples
5. Covers safety procedures during the installation, inspection and testing of a drainage structure
6. Identifies required documentation
7. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

**Objectives:** Upon completion of the course you will be able to:

1. Identify the different types of drainage structures
2. Recognize and use drainage staking information in the field
3. Interpret drainage plans
4. Calculate Structure Excavation Class B
5. Check flow lines and locations of pipes
6. Identify critical lines of communication
7. Complete required documentation.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of drainage structures.

**ELECTRICAL-ILLUMINATION & SIGNALS**

Code: API

Hours: 12

**Description:**

1. Provides an overview of the construction elements of the installation of signals and illuminations systems
2. Discusses review and approval of shop drawings
3. Identifies key components of illumination and signal systems
4. Covers staking locations of luminaries and signals
5. Includes information on collecting required material samples
6. Identifies safety procedures to use during the installation, inspection and testing of a drainage structure
7. Identifies required documentation
8. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

**Objectives:** Upon completion of the course you will be able to:

1. Identify illumination and signal system functions
2. Read and interpret illumination and Signal Plans
3. Check lighting and signal locations for possible interference
4. Identify critical lines of communication
5. Complete required documentation.

**Attendees:** For project inspectors and field engineers who are or will be engaged in a project requiring the installation of signals and illumination.

**EXCAVATION & EMBANKMENTS INSPECTION**

Code: AC3

Hours: 8

**Description:**

1. Provides an overview of the duties of a grade inspector
2. Defines clearing and grubbing limits
3. Covers environmental issues
4. Demonstrates proper staking procedures
5. Identifies proper methods of compaction
6. Gives an overview of the moisture-density gauge used in determining compaction
7. Includes information on collecting required material samples
8. Covers safety procedures during the installation and inspection of earthwork
9. Identifies required documentation
10. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

**Objectives:** Upon completion of the course you will be able to:

1. Interpret grading plans
2. Recognize and use staking information in the field
3. Evaluate information documented in density reports
4. Identify proper compaction methods
5. Recognize BMP's and evaluate erosion control measures
6. Calculate payment for clearing and grubbing and earthwork
7. Interpret grading stakes for cuts, fills and line
8. Identify critical lines of communication
9. Complete required documentation.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of grading on a project.

**HOT MIX ASPHALT PLACEMENT**

Code: ACB

Hours: 8

**Description:**

1. Provides an overview of equipment used in placing HMA and Superpave
2. Identifies the duties of an inspector prior to paving
3. Covers the key areas of inspection during placement
4. Covers safety procedures for working around a paving operation
5. Identifies post production duties
6. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications and testing procedures.

**Objectives:** Upon completion of the course you will be able to:

1. Implement proper asphalt paving inspection techniques
2. Complete required documentation
3. Identify lines of communication
4. Demonstrate an understanding of safety requirements
5. Read paving plans.

**Attendees:** For project inspectors and field engineers who are or will be engaged in the inspection, acceptance and documentation of Hot Mix Asphalt and Superpave placement.

**NUCLEAR GAUGE EMBANKMENT/SURFACING/PAVEMENT APPLICATIONS**

Code: ANQ

Hours: 8

**Description:** Demonstrates the proper use of the nuclear gauge; includes information on collecting samples; discusses the selection of the proper density standard; demonstrates test methods used in determining compaction of various materials; identifies safety procedures to use during the inspection and testing of embankment, surfacing and paving operations; covers required documentation; gives you a comprehensive course manual containing information on the operation of the nuclear gauge and references to critical specifications.

**Objectives:** Upon completion of the course you will be able to: Select and use the proper density standard; correct results for oversize and moisture; conduct proper drying procedures; perform density tests with acceptable accuracy; complete required documentation.

**Attendees:** For entry level to project inspectors.

### **NUCLEAR GAUGE AND SAFETY**

Code: ALG

Hours: 8

**Description:** Discusses the fundamentals of Radiation Theory; prepares you for the written and hands-on proficiency exams required for licensing; discusses health and safety issues associated with operating the Nuclear Moisture Density gauge; provides a working knowledge of the Troxler gauge; demonstrates the operation of the gauge. Gives you a comprehensive course manual containing outlines of the duties of an inspector and references to critical specifications.

**Objectives:** Upon completion of the course you will be able to: Take the proficiency exam; transport the gauge safely from the office to job site; handle emergency situations involving damage to the nuclear gauge.

**Attendees:** This course is for personnel (WSDOT employees and Local Agency employees only) who will be operating or transporting nuclear gauges. To become a licensed operator you will be required to take both a written and a hands-on proficiency test. At the end of this class you will be given the written exam. A passing score for this exam is 70% or above. Once you have passed this test you will be eligible for your nuclear badge.